

IN THE CLAIMS

Claims 1-55 (Canceled)

56. (New) A system comprising:

a network having a host coupled thereto, the host executing software to generate packets for communication on the network;

a bus with a bus device coupled thereto, wherein the bus device generates isochronous data and the network operates asynchronously, such that isochronous data is transported over an asynchronous network;

an interface coupling the network to the bus, the interface and host coordinating to (tunnel bus device packets over the network between the host and the bus device, wherein the host runs an application that generates the bus device packets) and relies on an operating system that includes a driver for the bus device, the driver to issue the bus device packets and redirect the bus device packets to a network stack that encapsulates the bus device packets to create a network packet and sends the network packet to the bus device via the interface, the interface to decapsulate the network packet to obtain the bus device packet and forward the bus device packet to the bus device.

57. (New) The system defined in Claim 56, wherein the interface generates network packets that encapsulate the bus events in a network protocol portion.

58. (New) The system defined in Claim 57, wherein the network protocol portion comprises an Internet Protocol (IP) portion.

59. (New) The system defined in Claim 57, wherein the network protocol portion includes a header for information to recreate bus events.

60. (New) The system defined in Claim 56, wherein each tunneled request includes a tunneling header and a tunneling data portion, wherein the tunneling data portion is specific to each tunneling packet type and tunneling transaction type, and the tunneling header is common among tunneling packet types.

61. (New) The system defined in Claim 60, wherein the tunneling header includes a field which specifies the type of packet as one of a group of control packet, an information packet, or an ownership packet.

62. (New) The system defined in Claim 60, wherein the tunneled packet comprises an IEEE 1394 packet.

63. (New) The system defined in Claim 60, wherein the tunneled packet comprises a USB packet.

64. (New) The system defined in Claim 60, wherein the tunneling header indicates the packet type and transaction type.

65. (New) The system defined in Claim 56, wherein the interface comprises a remote peripheral server.

66. (New) The system defined in Claim 56, wherein the network comprises an Internet Protocol (IP) Ethernet network.

67. (New) The system defined in Claim 56, wherein the bus comprises a serial bus.

68. (New) The system defined in claim 56, wherein the bus comprises a parallel bus.

69. (New) The system defined in Claim 56, wherein the bus adheres to the IEEE-1394 bus standard.

70. (New) The system defined in Claim 56, wherein the bus adheres to the Universal Serial Bus Standard (USB).

71. (New) A system comprising:

- a network having a host coupled thereto, the host executing software to generate packets for communication on the network;
- a bus with a bus device coupled thereto, wherein the bus device generates isochronous data and the network operates asynchronously, such that isochronous data is transported over an asynchronous network;
- an interface coupling the network to the bus, the interface and host coordinating to tunnel bus device packets over the network between the host and the bus device, wherein

the bus device generates the bus device packets for transport to the host and sends the bus device packets on the bus, the interface to encapsulate the bus device packets into a network packet and forward the network packet to the host, the host to execute a network driver that decapsulates the network packet, identify bus device packets therein and redirect the bus device packets to a bus device driver running thereon.

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72. (New) The system defined in Claim 71, wherein the interface generates network packets that encapsulate the bus events in a network protocol portion.

73. (New) The system defined in Claim 72, wherein the network protocol portion comprises an Internet Protocol (IP) portion.

74. (New) The system defined in Claim 72, wherein the network protocol portion includes a header for information to recreate bus events.

75. (New) The system defined in Claim 71, wherein each tunneled request includes a tunneling header and a tunneling data portion, wherein the tunneling data portion is specific to each tunneling packet type and tunneling transaction type, and the tunneling header is common among tunneling packet types.

76. (New) The system defined in Claim 75, wherein the tunneling header includes a field which specifies the type of packet as one of a group of control packet, an information packet, or an ownership packet.

85. (New) The system defined in Claim 71, wherein the bus adheres to the Universal Serial Bus Standard (USB).

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86. (New) A method of controlling devices across a network comprising:  
capturing bus events generated on a bus by a bus device that generates isochronous data;  
encapsulating the captured bus events into a packet associated with a network protocol using the interface;  
transporting the encapsulated bus event over a network that operates asynchronously, such that isochronous data is transported over an asynchronous network;  
decapsulating the encapsulated bus events, to recreate the bus events at a remote site using information in the header of the packet, wherein capturing, encapsulating, and decapsulating are performed while preserving one or more local bus properties.

87. (New) The method defined in Claim 86, wherein the remote site comprises a similar bus and similar bus device to that which generated the bus events.

88. (New) An apparatus for controlling devices across a network comprising:  
means for capturing bus events generated on a bus by a bus device that generates isochronous data;  
means for encapsulating the captured bus events into a packet associated with a network protocol using the interface;

77. (New) The system defined in Claim 75, wherein the tunneled packet comprises an IEEE 1394 packet.

78. (New) The system defined in Claim 75, wherein the tunneled packet comprises a USB packet.

79. (New) The system defined in Claim 75, wherein the tunneling header indicates the packet type and transaction type.

80. (New) The system defined in Claim 71, wherein the interface comprises a remote peripheral server.

81. (New) The system defined in Claim 71, wherein the network comprises an Internet Protocol (IP) Ethernet network.

82. (New) The system defined in Claim 71, wherein the bus comprises a serial bus.

83. (New) The system defined in claim 71, wherein the bus comprises a parallel bus.

84. (New) The system defined in Claim 71, wherein the bus adheres to the IEEE-1394 bus standard.

FI Cont means for transporting the encapsulated bus event over a network that operates asynchronously, such that isochronous data is transported over an asynchronous network;  
means for decapsulating the encapsulated bus events, to recreate the bus events at a remote site using information in the header of the packet, wherein capturing, encapsulating, and decapsulating are performed while preserving one or more local bus properties.